

10662781

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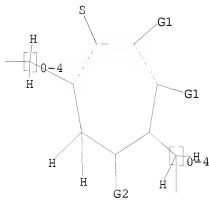
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L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STR



G1 H,S

G2 H,O

Structure attributes must be viewed using STN Express query preparation.

=> s l1 full

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 11:32:36 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 292237 TO ITERATE

100.0% PROCESSED 292237 ITERATIONS

118 ANSWERS

SEARCH TIME: 00.00.01

L2 118 SEA SSS FUL L1

L3 43 L2

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21939595 PY<2002

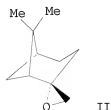
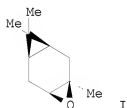
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10/05/2008

L4 37 L3 AND PY<2002

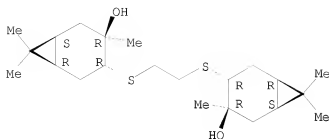
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L4 ANSWER 1 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2001:490629 CAPLUS
 DOCUMENT NUMBER: 135:257352
 TITLE: Synthesis of sulfur-containing bis-terpenoids based on monoterpene oxides
 AUTHOR(S): Startseva, V. A.; Nikitina, L. E.; Artemova, N. P.; Dieva, S. A.; Plemenkov, V. V.
 CORPORATE SOURCE: S. V. Kurashov Kazan' State Medical University, Kazan', 420012, Russia
 SOURCE: Chemistry of Natural Compounds (Translation of Khimiya Prirodnykh Soedinenii) (2001), Volume Date 2000, 36(6), 587-589
 CODEN: CHNCA8; ISSN: 0009-3130
 PUBLISHER: Consultants Bureau
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 135:257352
 GI



AB Ethanedithiol and di(mercaptoethyl)sulfide react regio- and stereoselectively with (+)-3-carene- β -oxide (I) and β -pinene- α -oxide (II) in the presence of sodium ethoxide to give the corresponding bis- and trissulfides with two terpene fragments.
 IT 361358-15-8P 361358-18-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (synthesis of sulfur-containing bis-terpenoids based on monoterpene oxides)
 RN 361358-15-8 CAPLUS
 CN Bicyclo[4.1.0]heptan-3-ol, 4,4'-[1,2-ethanediylbis(thio)]bis[3,7,7-trimethyl-, (1S,1'S,3R,3'R,4R,4'R,6R,6'R)- (9CI) (CA INDEX NAME)

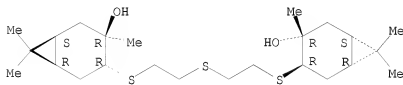
Absolute stereochemistry.



RN 361358-18-1 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 4,4'-[thiobis(2,1-ethanedithio)]bis[3,7,7-trimethyl-, (1S,1'S,3R,3'R,4R,4'R,6R,6'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:420854 CAPLUS

DOCUMENT NUMBER: 136:216889

TITLE: Synthesis of 4 α -alkylthiocarane-3 β -thiols

AUTHOR(S): Fedyunina, I. V.; Nikitina, L. E.; Plemenkov, V. V.

CORPORATE SOURCE: S. V. Kurashov Kazan' State Med. Inst., Russia

SOURCE: Khimiya Prirodnikh Soedinenii (1992), (5), 497-499

CODEN: KPSUAR; ISSN: 0023-1150

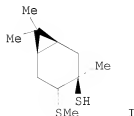
PUBLISHER: Izdatel'stvo Fan

DOCUMENT TYPE: Journal

LANGUAGE: Russian

OTHER SOURCE(S): CASREACT 136:216889

GI



AB Addition reactions of thiols to β -3,4-epithiocarane under conditions of base catalysis have been studied. The reaction takes place regio- and stereo-specifically with the formation of 4 α -alkylthiocarane-3 β -thiols, e.g. I.

IT 170509-59-8P 170716-52-6P 170716-54-8P

170897-50-4P

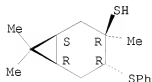
RL: SPN (Synthetic preparation); PREP (Preparation)

(synthesis of 4 α -alkylthiocarane-3 β -thiols)

RN 170509-59-8 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 3,7,7-trimethyl-4-(phenylthio)-, (1S,3R,4R,6R)- (CA INDEX NAME)

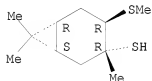
Absolute stereochemistry.



RN 170716-52-6 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 3,7,7-trimethyl-4-(methylthio)-, (1S,3R,4R,6R)- (CA INDEX NAME)

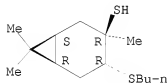
Absolute stereochemistry. Rotation (-).



RN 170716-54-8 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 4-(butylthio)-3,7,7-trimethyl-, (1S,3R,4R,6R)- (CA INDEX NAME)

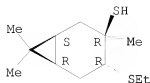
Absolute stereochemistry. Rotation (-).



RN 170897-50-4 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 4-(ethylthio)-3,7,7-trimethyl-, (1S,3R,4R,6R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L4 ANSWER 3 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:361751 CAPLUS

DOCUMENT NUMBER: 135:152572

TITLE: Strained cyclopropenes. Synthesis and reactions of 3-isopropenyl-6-methylbicyclo[4.1.0]hept-1(7)-ene in situ

AUTHOR(S): Startseva, V. A.; Nikitina, L. E.; Plemenkov, V. V.
 CORPORATE SOURCE: Kurashov Kazan State Medical University, Kazan, Russia
 SOURCE: Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (2000), 70(11), 1760-1762

CODEN: RJGCEK; ISSN: 1070-3632

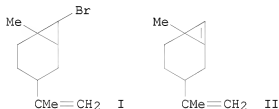
PUBLISHER: MAIK Nauka/Interperiodica Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 135:152572

GI



AB 7-Bromo-4-isopropenyl-1-methylbicyclo[4.1.0]heptane (I), generated by electrochem. reduction of the corresponding dibromocyclopropane, reacted with strong bases to give short-lived 3-isopropenyl-6-methylbicyclo[4.1.0]hept-1(7)-ene (II), whose formation was proved by Diels-Alder reactions with isoprene and alloocimene in situ. The reaction of I with 2-mercaptoethanol in the presence of potassium tert-butoxide demonstrated the possibility of formal replacement of the bromine atom in the substrate by a sulfide moiety.

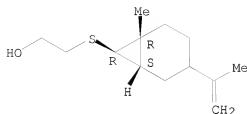
IT 352311-56-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (formation and reactions of 3-isopropenyl-6-methylbicyclo[4.1.0]hept-1(7)-ene in situ)

RN 352311-56-9 CAPLUS

CN Ethanol, 2-[[[(1R,6S,7R)-1-methyl-4-(1-methylethenyl)bicyclo[4.1.0]hept-7-yl]thio]-, rel- (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:267194 CAPLUS

DOCUMENT NUMBER: 135:31482

TITLE: Cyanide and thiocyanate-based biosynthesis in tropical marine sponges

AUTHOR(S): Simpson, Jamie S.; Garson, Mary J.

CORPORATE SOURCE: Department of Chemistry, The University of Queensland, Brisbane, 4072, Australia

SOURCE: ACGC Chemical Research Communications (2000), 11, 38-44

CODEN: ACRCFA; ISSN: 1020-5586

PUBLISHER: Asian Coordinating Group for Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The marine sponge *Axinyssa* n.sp. incorporates both sodium [^{14}C] cyanide and sodium [^{14}C] thiocyanate into 2-thiocyanatoneopupukeanane as well as into 9-isothiocyanatopupukeanane, however these two precursors were poorly incorporated into 9-isocyanopupukeanane. The specificity of incorporation into the thiocyanate carbon was confirmed by chemical degradation. *Stylotella aurantium* incorporates sodium [^{14}C] cyanide and sodium [^{14}C] thiocyanate into the dichloroimine functionality of the stylotellanes A and B, as well as into the isothiocyanate. The specificity of incorporation into the dichloroimine carbon atom was confirmed by chemical degradation. A ^{14}C -labeled sample of bisisothiocyanatoadociane was incorporated into diisocyanoadociane by *A. terpenensis*.

IT 342580-08-9

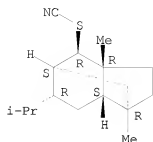
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)

(cyanide and thiocyanate-based biosynthesis in tropical marine sponges)

RN 342580-08-9 CAPLUS

CN Thiocyanic acid, (1R,3aR,4R,5S,6R,7aS)-octahydro-1,3a-dimethyl-6-(1-methylethyl)-1,5-methano-1H-inden-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:85156 CAPLUS

DOCUMENT NUMBER: 134:252485

TITLE: The first total synthesis of (±)-2-thiocyanatoneopupukeanane based on a pinacol-type rearrangement

AUTHOR(S): Uyehara, T.; Onda, K.; Nozaki, N.; Karikomi, M.; Ueno, M.; Sato, T.

CORPORATE SOURCE: Faculty of Engineering, Department of Applied Chemistry, Utsunomiya University, Utsunomiya, Tochigi, 321-8585, Japan

SOURCE: Tetrahedron Letters (2001), 42(4), 699-702

CODEN: TELEAY; ISSN: 0040-4039

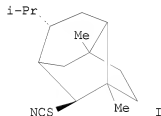
PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:252485

GI



AB The racemic mixture of 2-thiocyanatoneopupukeanane (I), a marine sesquiterpene-thiocyanate with a tricyclo[4.3.1.0^{3,7}]decane skeleton, was prepared through a pinacol-type rearrangement of a bicyclo[2.2.2]oct-5-en-2-ol giving a bicyclo[3.2.1]oct-6-en-2-one derivative and an aldol reaction leading to the neopupukeanane framework.

IT 330840-69-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

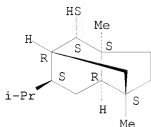
(total synthesis of (±)-2-thiocyanatoneopupukeanane via pinacol-type rearrangement)

10/923,271

RN 330840-69-2 CAPLUS

CN 1,5-Methano-1H-indene-4-thiol, octahydro-1,3a-dimethyl-6-(1-methylethyl)-, (1R,3aR,4R,5S,6R,7aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



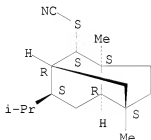
IT 330840-39-6P, (±)-2-Thiocyanatoneopupukeanane

RL: SPN (Synthetic preparation); PREP (Preparation)
(total synthesis of (±)-2-thiocyanatoneopupukeanane via pinacol-type rearrangement)

RN 330840-39-6 CAPLUS

CN Thiocyanic acid, (1R,3aR,4R,5S,6R,7aS)-octahydro-1,3a-dimethyl-6-(1-methylethyl)-1,5-methano-1H-inden-4-yl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:680627 CAPLUS

DOCUMENT NUMBER: 134:56805

TITLE: Enantiospecific total synthesis of both enantiomers of 2-thiocyanatoneopupukeanane from (R)-carvone

AUTHOR(S): Srikrishna, A.; Gharpure, Santosh J.
CORPORATE SOURCE: Department of Organic Chemistry, Indian Institute of Science, Bangalore, 560 012, India

SOURCE: Perkin 1 (2000), (19), 3191-3193

CODEN: PERKF9; ISSN: 1470-4358

Royal Society of Chemistry

PUBLISHER:

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 134:56805

AB Enantiospecific synthesis of both enantiomers of the marine sesquiterpene 2-thiocyanatoneopupukeanane starting from (R)-carvone, employing an intramol. rhodium carbenoid C-H insertion reaction as the key step, is described.

IT 137371-79-0P 313672-32-1P

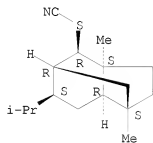
RL: SPN (Synthetic preparation); PREP (Preparation)

(synthesis of both enantiomers of 2-thiocyanatoneopupukeanane from (R)-carvone)

RN 137371-79-0 CAPLUS

CN Thiocyanic acid, (1S,3aS,4R,5R,6S,7aR)-octahydro-1,3a-dimethyl-6-(1-methylethyl)-1,5-methano-1H-inden-4-yl ester (9CI) (CA INDEX NAME)

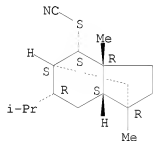
Absolute stereochemistry. Rotation (-).



RN 313672-32-1 CAPLUS

CN Thiocyanic acid, (1R,3aR,4S,5S,6R,7aS)-octahydro-1,3a-dimethyl-6-(1-methylethyl)-1,5-methano-1H-inden-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:208836 CAPLUS

DOCUMENT NUMBER: 132:347746

TITLE: Bicentral bimolecular nucleophilic substitution (SN2) in 2-methyl-1-chlorothioalkanes. Ab initio calculations

AUTHOR(S): Apollonova, S. A.; Yermolaeva, L. V.; Plemenkov, V. V.; Konovalov, A. I.

CORPORATE SOURCE: Kazan State Medical University, Kazan, Russia

SOURCE: Russian Journal of Organic Chemistry (Translation of Zhurnal Organicheskoi Khimii) (1999), 35(8), 1135-1140
CODEN: RJOCEQ; ISSN: 1070-4280

PUBLISHER: MAIK Nauka/Interperiodica Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

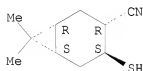
AB AM1 and ab initio MO calcns. using the 3-21G(+) basis set for the mechanism of nucleophilic substitution in 2-(methylthio)-1-chloroethanes (I) and 4-mercapto-3-chlorocarane showed that the reaction with a cyanide anion occurs as 2 consecutive SN2 reactions which result in a product with reversed configuration at 2 reaction centers and with sulfide group transferred to the β -C atom. Both reactions have a common intermediate, a cyclic anion of thiirane structure containing both the attacking and leaving groups. A possibility of bicentral bimol. nucleophilic substitution (2-SN2) in I when the nucleophile attacks the α -C atom and the anion leaves the β -C atom was theor. shown for the 1st time.

IT 269065-17-0P
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(ab initio calcns. of bicentral bimol. nucleophilic substitution in 2-methyl-1-chlorothioalkanes)

RN 269065-17-0 CAPLUS

CN Bicyclo[4.1.0]heptane-3-carbonitrile, 4-mercapto-7,7-dimethyl-, (1R,3R,4S,6S)-rel- (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:495688 CAPLUS

DOCUMENT NUMBER: 129:214362

TITLE: Thiocyanate biosynthesis in the tropical marine sponge Axinyssa n.sp.

AUTHOR(S): Simpson, Jamie S.; Garson, Mary J.

CORPORATE SOURCE: Department of Chemistry, The University of Queensland, Brisbane, QLD 4072, Australia

SOURCE: Tetrahedron Letters (1998), 39(32), 5819-5822
CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The biosynthetic origin of the thiocyanate carbon in 2-thiocyanatoneopupukeanane is defined by incorporation of sodium [14C] cyanide and [14C] thiocyanate into Axinyssa n.sp. The specificity of

incorporation is demonstrated by reduction of 2-thiocyanatoneopupukeanane to the thiol.

IT 137371-79-0P 212510-85-5P

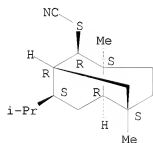
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)

(thiocyanate biosynthesis in the tropical marine sponge *Axinyssa*)

RN 137371-79-0 CAPLUS

CN Thiocyanic acid, (1S,3aS,4R,5R,6S,7aR)-octahydro-1,3a-dimethyl-6-(1-methylethyl)-1,5-methano-1H-inden-4-yl ester (9CI) (CA INDEX NAME)

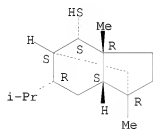
Absolute stereochemistry. Rotation (-).



RN 212510-85-5 CAPLUS

CN 1,5-Methano-1H-indene-8-thiol, octahydro-1,3a-dimethyl-6-(1-methylethyl)-, (1R,3aR,5S,6R,7aS,8S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:411000 CAPLUS

DOCUMENT NUMBER: 129:15921

TITLE: Photochemistry of Aliphatic Thioketones in the Gas Phase

AUTHOR(S): Morrison, Harry; Lu, Yuelie; Carlson, Dean

CORPORATE SOURCE: Department of Chemistry, Purdue University, West Lafayette, IN, 47907-1393, USA

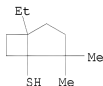
SOURCE: Journal of Physical Chemistry A (1998), 102(28), 5421-5432

CODEN: JPCAFH; ISSN: 1089-5639

PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 129:15921

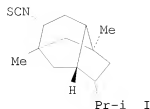
AB The solution and gas-phase photophys. and photochem. properties of a series of bicyclic and alicyclic thioketones, i.e. apothiocamphor, thiocamphor, thiofenchone, endo-5,6-trimethylene-2-norbornanethione, 3,3-diethylbicyclo[3.2.1]octane-2-thione, 2,2-diethyl-5,5-dimethylcyclopentanethione, 2-ethyl-2,6,6-trimethylcyclohexanethione, and 2,4,4-trimethyl-3-hexanethione, were reported. Photolysis in solution typically gave products arising from insertion into β , γ , and, in the one case of endo-5,6-trimethylene-2-norbornanethione, δ carbons to form cyclic thiols. This chemical was analogous to that observed in earlier studies. Novel photochem. was found in the gas phase where Norrish type II products were also isolated from several substrates. The effect of the quencher gas, butane, on both the spectral and photochem. properties of thiocamphor in the gas phase provide evidence to support the proposal that the Norrish type II chemical arises from initially populated vibrationally excited levels of S2.

IT 205485-93-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (photochem. and spectral properties of aliphatic thioketones in the gas phase)
 RN 205485-93-4 CAPLUS
 CN Bicyclo[3.2.0]heptane-1-thiol, 5-ethyl-2,2-dimethyl- (CA INDEX NAME)



REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1998:111981 CAPLUS
 DOCUMENT NUMBER: 128:241934
 TITLE: Terpene metabolites from the tropical marine sponge Axinyssa sp. nov
 AUTHOR(S): Simpson, Jamie S.; Garson, Mary J.; Hooper, John N. A.; Cline, Edith I.; Angerhofer, Cindy K.
 CORPORATE SOURCE: Department of Chemistry, The University of Queensland, Brisbane, QLD. 4072, Australia
 SOURCE: Australian Journal of Chemistry (1997), 50(12), 1123-1127
 CODEN: AJCHAS; ISSN: 0004-9425
 PUBLISHER: CSIRO Australia
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



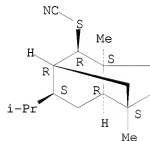
AB A new sesquiterpene isothiocyanate, (-)-9-isothiocyanatopupukeanane (I), has been isolated along with the known sesquiterpene metabolites (-)-9-isocyanopupukeanane, (-)-2-thiocyanatoneopupukeanane and (-)-epipolasin-A from the sponge *Axinyssa* sp. nov. Three metabolites showed modest in vitro antimalarial activity.

IT 137371-79-0P
 RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
 (terpene metabolites isolation and structural characterization and antimalarial and cytotoxic activity from marine sponge *Axinyssa*)

RN 137371-79-0 CAPLUS

CN Thiocyanic acid, (1S,3aS,4R,5R,6S,7aR)-octahydro-1,3a-dimethyl-6-(1-methylethyl)-1,5-methano-1H-inden-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

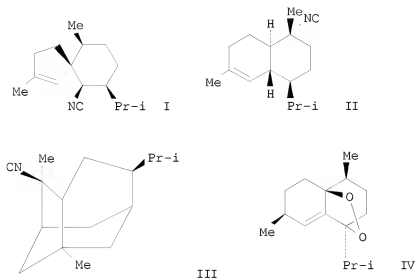


REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1996:433913 CAPLUS
 DOCUMENT NUMBER: 125:110580
 TITLE: New antifouling sesquiterpenes from four nudibranchs of the family Phyllidiidae
 AUTHOR(S): Okino, Tatsufumi; Yoshimura, Erina; Hirota, Hiroshi; Fusetani, Nobuhiro
 CORPORATE SOURCE: Res. Dev. Corp. Japan, Niigata Eng. Co., Ltd., Yokohama, 235, Japan
 SOURCE: Tetrahedron (1996), 52(28), 9447-9454
 CODEN: TETRAB; ISSN: 0040-4020
 PUBLISHER: Elsevier

DOCUMENT TYPE:
LANGUAGE:
GI

Journal
English



AB Three new antifouling sesquiterpene isocyanides (I-III) were isolated from nudibranchs of the family Phyllidiidae along with a new sesquiterpene peroxide (IV) and 6 known sesquiterpenes. Their structures were determined mainly on the basis of 2-dimensional NMR data. These compds. showed potent antifouling activity against larvae of the barnacle *Balanus amphitrite*.

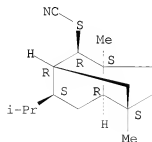
IT 137371-79-0

RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(sesquiterpene isolation and structural characterization and antifouling activity from nudibranchs)

RN 137371-79-0 CAPLUS

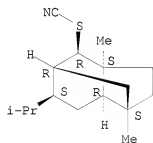
CN Thiocyanic acid, (1S,3aS,4R,5R,6S,7aR)-octahydro-1,3a-dimethyl-6-(1-methylethyl)-1,5-methano-1H-inden-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



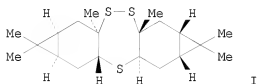
L4 ANSWER 12 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1996:423807 CAPLUS
 DOCUMENT NUMBER: 125:160835
 TITLE: Antifouling activity of isocyanoterpenoids and related compounds isolated from a marine sponge and Nudibranchs
 AUTHOR(S): Fusetani, Nobuhiro; Hiroto, Hiroshi; Okino, Tatsufumi; Tomono, Yasuhiko; Yoshimura, Erina
 CORPORATE SOURCE: Graduate School Agriculture and Agricultural Life Science, University Tokyo, Tokyo, 113, Japan
 SOURCE: Journal of Natural Toxins (1996), 5(2), 249-259
 CODEN: JNTOER; ISSN: 1058-8108
 PUBLISHER: Alaken
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A total of 32 sesquiterpenes and diterpenes comprising isocyno, isothiocyano, or related functionalities were isolated as antifouling agents against cyprid larvae of the barnacle *Balanus amphitrite* from the marine sponge *Acanthella cavernosa* and three species of nudibranchs of the family Phyllidiidae. Several isocyanoterpenoids, e.g., kalihinol A, 10-formamidokalihinene, 15-formamidokalihinene, 13-isocyanotheonellin, and 10-isocyno-4-cadinene were highly antifouling, whereas their toxicity to cyprids were quite low. These results suggested that marine isocyanoterpenes are promising antifouling agents.
 IT 137371-79-0
 RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (antifouling activity of isocyanoterpenoids and related compds. isolated from a marine sponge and Nudibranchs)
 RN 137371-79-0 CAPLUS
 CN Thiocyanic acid, (1S,3aS,4R,5R,6S,7aR)-octahydro-1,3a-dimethyl-6-(1-methylethyl)-1,5-methano-1H-inden-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



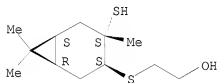
L4 ANSWER 13 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1996:382346 CAPLUS
 DOCUMENT NUMBER: 125:114866
 TITLE: Synthesis of carane sulfide derivatives by reaction of 3-carene sulfides with functional derivatives of

AUTHOR(S): mercaptans
 Fedyunina, I. V.; Plemenkov, V. V.; Nikitina, L. E.;
 Litvinov, I. A.; Kataeva, O. N.
 CORPORATE SOURCE: Kazan. Gos. Med. Inst., Kazan, Russia
 SOURCE: Khimiya Prirodnikh Soedinenii (1995), (4),
 576-580
 CODEN: KPSUAR; ISSN: 0023-1150
 PUBLISHER: Fan
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 GI



AB Reaction of 3-carene α - and β -sulfide with 2-mercaptoethanol
 gave isomers of 4-[(2-hydroxyethyl)thio]-3-caranethiol and
 3-[(2-hydroxyethyl)dithio]-4-[(2-hydroxyethyl)thio]carane. Reaction of
 the β -episulfide with mercaptoacetic acid gave heterocycle I.
 IT 179032-44-1P 179032-45-2P 179237-36-6P
 179237-37-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 179032-44-1 CAPLUS
 CN Ethanol, 2-[(4-mercapto-4,7,7-trimethylbicyclo[4.1.0]hept-3-yl)thio]-,
 [1R-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

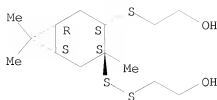
Absolute stereochemistry.



RN 179032-45-2 CAPLUS
 CN Ethanol, 2-[[4-[(2-hydroxyethyl)dithio]-4,7,7-trimethylbicyclo[4.1.0]hept-
 3-yl]thio]-, [1S-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX
 NAME)

Absolute stereochemistry.

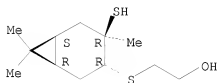
10/923,271



RN 179237-36-6 CAPLUS

CN Ethanol, 2-[(4-mercapto-4,7,7-trimethylbicyclo[4.1.0]hept-3-yl)thio]-, [1R-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

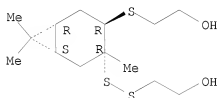
Absolute stereochemistry.



RN 179237-37-7 CAPLUS

CN Ethanol, 2-[[4-[(2-hydroxyethyl)thio]-3,7,7-trimethylbicyclo[4.1.0]hept-3-yl]dithio]-, [1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 14 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:169716 CAPLUS

DOCUMENT NUMBER: 124:317492

TITLE: A new practical synthesis of (+)-grandisol from (+)-citronellol using an intramolecular carbenoid cyclization

AUTHOR(S): Monteiro, Hugo J.; Zukerman-Schpector, Julio
CORPORATE SOURCE: Dep. Quimica, Univ. Brasilia, Brasilia, 70910-900, Brazil

SOURCE: Tetrahedron (1996), 52(11), 3879-88

CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 124:317492

AB A new practical 10 step synthesis of (1S,2R)-2-acetyl-1-

methylcyclobutaneacetic acid (I) is reported, which has a key step a rhodium catalyzed intramol. carbenoid cyclization of the α -diazo- β -ketosulfone, $R-PhSO_2C(:N_2)COCH_2CH_2CHMeCH_2CH_2OMe$, readily available from (+)-citronellol. Since I has already been converted into (+)-grandisol, the major pheromone of the cotton boll-weevil *Anthonomus grandis*, the described preparation constitutes a new formal synthesis of the optically active pheromone.

IT 175882-22-1P 176021-13-9P

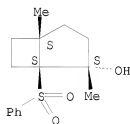
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of (+)-grandisol from (+)-citronellol using intramol. carbenoid cyclization)

RN 175882-22-1 CAPLUS

CN Bicyclo[3.2.0]heptan-2-ol, 2,5-dimethyl-1-(phenylsulfonyl)-, [1S-(1 α ,2 β ,5 α)]- (9CI) (CA INDEX NAME)

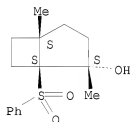
Absolute stereochemistry. Rotation (+).



RN 176021-13-9 CAPLUS

CN Bicyclo[3.2.0]heptan-2-ol, 2,5-dimethyl-1-(phenylsulfonyl)-, (1 α ,2 β ,5 α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 15 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:821294 CAPLUS

DOCUMENT NUMBER: 123:340410

TITLE: Synthesis of caranoids with two sulfide groups from α - and β -thiooxide of 3-carene

AUTHOR(S): Fedyunina, I. V.; Nikitina, L. E.; Plemenkov, V. V.

CORPORATE SOURCE: Kazan. Gos. Med. Inst., Kazan, Russia

SOURCE: Khimiya Prirodnikh Soedinenii (1993), (5), 677-84

CODEN: KPSUAR; ISSN: 0023-1150

PUBLISHER: Fan
DOCUMENT TYPE: Journal
LANGUAGE: Russian

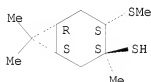
AB Reaction of carene epoxides with thiourea hemisulfate gave the episulfides. Addition of Na thiolates to the episulfides gave 4-(alkylthio)-3-caranethiols, which were then alkylated on the SH group.
IT 170509-55-4P 170509-56-5P 170509-57-6P
170509-58-7P 170509-59-8P 170509-60-1P
170509-61-2P 170509-62-3P 170509-63-4P
170509-64-5P 170509-65-6P 170716-52-6P
170716-53-7P 170716-54-8P 170716-55-9P
170716-56-0P 170716-57-1P 170716-58-2P
170897-50-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 170509-55-4 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 3,7,7-trimethyl-4-(methylthio)-,
[1S-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

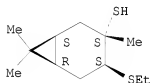
Absolute stereochemistry. Rotation (+).



RN 170509-56-5 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 4-(ethylthio)-3,7,7-trimethyl-,
[1S-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

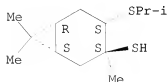
Absolute stereochemistry. Rotation (+).



RN 170509-57-6 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 3,7,7-trimethyl-4-[(1-methylethyl)thio]-,
[1S-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

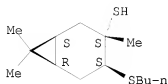


10/923,271

RN 170509-58-7 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 4-(butylthio)-3,7,7-trimethyl-,
[1S-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

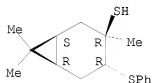
Absolute stereochemistry. Rotation (+).



RN 170509-59-8 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 3,7,7-trimethyl-4-(phenylthio)-,
[1S,3R,4R,6R)]- (CA INDEX NAME)

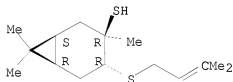
Absolute stereochemistry.



RN 170509-60-1 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 3,7,7-trimethyl-4-[(3-methyl-2-
butenyl)thio]-, [1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA
INDEX NAME)

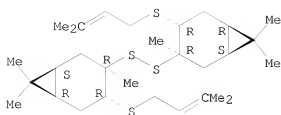
Absolute stereochemistry.



RN 170509-61-2 CAPLUS

CN Disulfide, bis[3,7,7-trimethyl-4-[(3-methyl-2-
butenyl)thio]bicyclo[4.1.0]hept-3-yl], [1S-[1 α ,3 β (1R*,3S*,4S*,6
S*),4 α ,6 α]]- (9CI) (CA INDEX NAME)

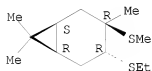
Absolute stereochemistry.



RN 170509-62-3 CAPLUS

CN Bicyclo[4.1.0]heptane, 4-(ethylthio)-3,7,7-trimethyl-3-(methylthio)-, [1S-(1α,3β,4α,6α)]- (9CI) (CA INDEX NAME)

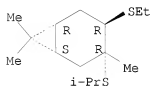
Absolute stereochemistry.



RN 170509-63-4 CAPLUS

CN Bicyclo[4.1.0]heptane, 4-(ethylthio)-3,7,7-trimethyl-3-[(1-methylethyl)thio]-, [1S-(1α,3β,4α,6α)]- (9CI) (CA INDEX NAME)

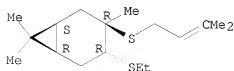
Absolute stereochemistry. Rotation (-).



RN 170509-64-5 CAPLUS

CN Bicyclo[4.1.0]heptane, 4-(ethylthio)-3,7,7-trimethyl-3-[(3-methyl-2-butenyl)thio]-, [1S-(1α,3β,4α,6α)]- (9CI) (CA INDEX NAME)

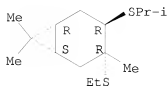
Absolute stereochemistry.



RN 170509-65-6 CAPLUS

CN Bicyclo[4.1.0]heptane, 3-(ethylthio)-3,7,7-trimethyl-4-[(1-methylethyl)thio]-, [1S-(1α,3β,4α,6α)]- (9CI) (CA INDEX NAME)

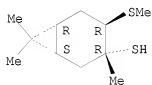
Absolute stereochemistry. Rotation (-).



RN 170716-52-6 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 3,7,7-trimethyl-4-(methylthio)-,
(1S,3R,4R,6R)- (CA INDEX NAME)

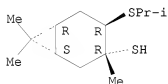
Absolute stereochemistry. Rotation (-).



RN 170716-53-7 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 3,7,7-trimethyl-4-[(1-methylethyl)thio]-,
(1α,3β,4α,6α)- (9CI) (CA INDEX NAME)

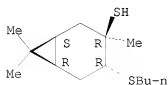
Absolute stereochemistry. Rotation (-).



RN 170716-54-8 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 4-(butylthio)-3,7,7-trimethyl-,
(1S,3R,4R,6R)- (CA INDEX NAME)

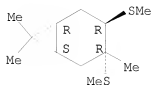
Absolute stereochemistry. Rotation (-).



RN 170716-55-9 CAPLUS

CN Bicyclo[4.1.0]heptane, 3,7,7-trimethyl-3,4-bis(methylthio)-,
[1S-(1α,3β,4α,6α)]- (9CI) (CA INDEX NAME)

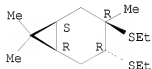
Absolute stereochemistry.



RN 170716-56-0 CAPLUS

CN Bicyclo[4.1.0]heptane, 3,4-bis(ethylthio)-3,7,7-trimethyl-,
[1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

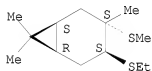
Absolute stereochemistry.



RN 170716-57-1 CAPLUS

CN Bicyclo[4.1.0]heptane, 4-(ethylthio)-3,7,7-trimethyl-3-(methylthio)-,
(1 α ,3 α ,4 β ,6 α)- (9CI) (CA INDEX NAME)

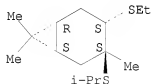
Absolute stereochemistry.



RN 170716-58-2 CAPLUS

CN Bicyclo[4.1.0]heptane, 4-(ethylthio)-3,7,7-trimethyl-3-[(1-
methylethyl)thio]-, (1 α ,3 α ,4 β ,6 α)- (9CI) (CA INDEX
NAME)

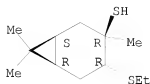
Absolute stereochemistry.



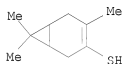
RN 170897-50-4 CAPLUS

CN Bicyclo[4.1.0]heptane-3-thiol, 4-(ethylthio)-3,7,7-trimethyl-,
(1S,3R,4R,6R)- (CA INDEX NAME)

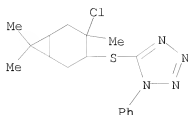
Absolute stereochemistry. Rotation (-).



L4 ANSWER 16 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1994:8529 CAPLUS
 DOCUMENT NUMBER: 120:8529
 ORIGINAL REFERENCE NO.: 120:1877a,1880a
 TITLE: Reaction of 3,3-disubstituted cyclopropenes and other
 cycloolefins with 1-phenyltetrazole-5-sulphenyl
 chloride
 AUTHOR(S): Khaliullin, R. R.; Plemenkov, V. V.
 CORPORATE SOURCE: Kazan. Gos. Med. Inst., Kazan, Russia
 SOURCE: Zhurnal Obshchei Khimii (1993), 63(4), 874-9
 CODEN: ZOKHA4; ISSN: 0044-460X
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 OTHER SOURCE(S): CASREACT 120:8529
 AB The title reaction, including 3-carene, gave 2-chloro-1-(1-
 phenyltetrazolylthio)cycloalkanes. The stereoselectivity of
 heterylphenylsulfenyl chloride addition to unsym. 3,3-disubstituted
 cyclopropenes was determined both by orbital and by steric factors. The
 reaction may be used as a convenient method for introduction of a
 heterocyclic group into the functional environment of a cyclopropane ring.
 IT 94268-56-1P 151693-43-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 94268-56-1 CAPLUS
 CN Bicyclo[4.1.0]hept-3-ene-3-thiol, 4,7,7-trimethyl- (CA INDEX NAME)

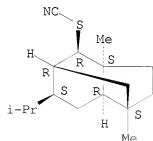


RN 151693-43-5 CAPLUS
 CN 1H-Tetrazole, 5-[(4-chloro-4,7,7-trimethylbicyclo[4.1.0]hept-3-yl)thio]-1-
 phenyl- (CA INDEX NAME)

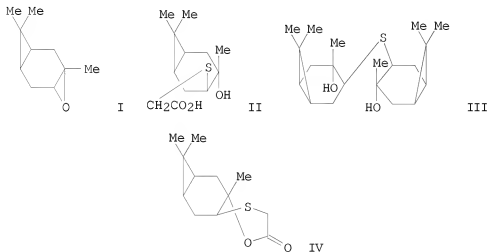


L4 ANSWER 17 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1992:487084 CAPLUS
 DOCUMENT NUMBER: 117:87084
 ORIGINAL REFERENCE NO.: 117:15131a,15134a
 TITLE: Sesquiterpene thiocyanates and isothiocyanates from Axinyssa aplysinoides
 AUTHOR(S): He, Hai Yin; Salva, Javier; Catalos, Robert F.; Faulkner, D. John
 CORPORATE SOURCE: Scripps Inst. Oceanogr., Univ. California, San Diego, La Jolla, CA, 92093-0212, USA
 SOURCE: Journal of Organic Chemistry (1992), 57(11), 3191-4
 CODEN: JOCEAH; ISSN: 0022-3263
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A specimen of Axinyssa (= Trachyopsis) aplysinoides from Palau contains (1R*,2R*,3R*,5R*,6S*,7S*)-2-thiocyanatopupukeanane. A specimen of A. aplysinoides from Pohnpei yielded two new isothiocyanates, (1S*,2R*,5S*,6S*,7R*,8S)-13-isothiocyanatocubebane and (1R*,4S*,5R*,6S*,7S*,10R*)-1-isothiocyanatoaromadendrane. A second specimen of A. aplysinoides from Pohnpei contained axisonitrile-3 and (1S*,2S*,3R*,6R*,7S*,9R*)-2-thiocyanatoneopupukaenane, which has a different stereochem. at C-2 to that assigned previously.
 IT 137371-79-0
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (of sponge)
 RN 137371-79-0 CAPLUS
 CN Thiocyanic acid, (1S,3aS,4R,5R,6S,7aR)-octahydro-1,3a-dimethyl-6-(1-methylethyl)-1,5-methano-1H-inden-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L4 ANSWER 18 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1992:129272 CAPLUS
 DOCUMENT NUMBER: 116:129272
 ORIGINAL REFERENCE NO.: 116:21903a,21906a
 TITLE: Synthesis of sulfide derivatives of the carane series
 by reaction of 3-carene oxide with Functional
 mercaptans
 AUTHOR(S): Artemova, N. P.; Bikkulatova, G. Sh.; Plemenkov, V.
 V.; Naumov, V. A.; Kataeva, O. N.
 CORPORATE SOURCE: Kazan. Gos. Med. Inst., Kazan, USSR
 SOURCE: Khimiya Prirodnikh Soedinenii (1991), (2),
 193-8
 CODEN: KPSUAR; ISSN: 0023-1150
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 OTHER SOURCE(S): CASREACT 116:129272
 GI



AB Reaction of 3-carene epoxide (I) with mercaptans under base-catalyzed conditions proceeds regio- and stereoselectively, and is a convenient process for obtaining polyfunctional 3-carene derivs. and products of their chemical transformations, e.g. hydroxyethylthiocaranols, alkylthiocaranolcarboxylates, and carane thiolactones. A new type of bicyclic terpene, bis(hydroxycaranyl) sulfides, is obtained together with the above products. Thus, treating I with HSCH₂CO₂H in EtOH containing NaOEt gave 16% carboxylic acid II and 9% sulfide III. Heating II in H₂O at 90° gave 20.5% spiro derivative IV.

IT 139259-48-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and hydrolysis of, thiolactone from)

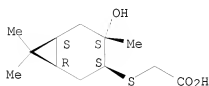
RN 139259-48-6 CAPLUS

CN Acetic acid, [(4-hydroxy-4,7,7-trimethylbicyclo[4.1.0]hept-3-yl)thio]-,

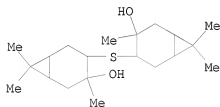
10/923,271

[1R-(1 α , 3 β , 4 α , 6 α)]- (9CI) (CA INDEX NAME)

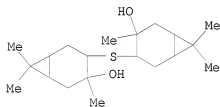
Absolute stereochemistry.



IT 135028-46-5P 135028-49-8P 139259-47-5P
139259-50-0P 139259-51-1P 139259-53-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 135028-46-5 CAPLUS
CN Bicyclo[4.1.0]heptan-3-ol, 4,4'-thiobis[3,7,7-trimethyl-,
[1S-[1 α , 3 α , 4 β (1'R*, 3'R*, 4'R*, 6'S*), 6 α]]- (9CI) (CA
INDEX NAME)



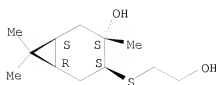
RN 135028-49-8 CAPLUS
CN Bicyclo[4.1.0]heptan-3-ol, 4,4'-thiobis[3,7,7-trimethyl-,
[1S-[1 α , 3 β , 4 α (1'R*, 3'S*, 4'S*, 6'S*), 6 α]]- (9CI) (CA
INDEX NAME)



RN 139259-47-5 CAPLUS
CN Bicyclo[4.1.0]heptan-3-ol, 4-[(2-hydroxyethyl)thio]-3,7,7-trimethyl-,
[1S-(1 α , 3 α , 4 β , 6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

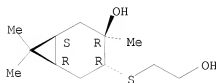
10/923,271



RN 139259-50-0 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 4-[(2-hydroxyethyl)thio]-3,7,7-trimethyl-,
[1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

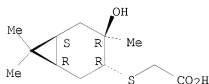
Absolute stereochemistry.



RN 139259-51-1 CAPLUS

CN Acetic acid, [(4-hydroxy-4,7,7-trimethylbicyclo[4.1.0]hept-3-yl)thio]-,
[1R-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

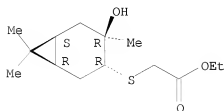
Absolute stereochemistry.



RN 139259-53-3 CAPLUS

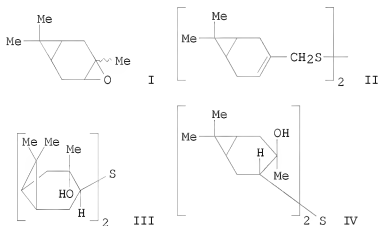
CN Acetic acid, [(4-hydroxy-4,7,7-trimethylbicyclo[4.1.0]hept-3-yl)thio]-,
ethyl ester, [1R-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

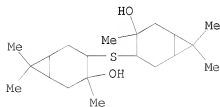


L4 ANSWER 19 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:41777 CAPLUS

DOCUMENT NUMBER: 116:41777
 ORIGINAL REFERENCE NO.: 116:7185a,7188a
 TITLE: Reaction of 3-carene oxides with thiourea
 AUTHOR(S): Artemova, N. P.; Bikkulatova, G. Sh.; Plemenkov, V.
 V.; Efremov, Yu. Ya.
 CORPORATE SOURCE: Kazan. Gos. Med. Inst., Kazan, USSR
 SOURCE: Zhurnal Obshchei Khimii (1991), 61(6),
 1484-5
 CODEN: ZOKHA4; ISSN: 0044-460X
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 OTHER SOURCE(S): CASREACT 116:41777
 GI



AB Reaction of 3-carene epoxides I with thiourea in EtOH gave disulfide II.
 When EtONa was added to reaction the sulfides III and IV were formed.
 IT 138232-97-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, via reaction of carene α -epoxide with thiourea and
 ethoxide)
 RN 138232-97-0 CAPLUS
 CN Bicyclo[4.1.0]heptan-3-ol, 4,4'-thiobis[3,7,7-trimethyl-,
 [1 α ,3 α ,4 β (1'R*,3'R*,4'R*,6'S*),6 α]- (9CI) (CA
 INDEX NAME)

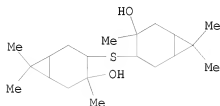


IT 138232-98-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, via reaction of carene β -epoxide with thiourea and
ethoxide)

RN 138232-98-1 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 4,4'-thiobis[3,7,7-trimethyl-,
[2 α ,3 β ,4 α (1'R*,3'S*,4'S*,6'S*),6 α]- (9CI) (CA
INDEX NAME)



L4 ANSWER 20 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:652363 CAPLUS

DOCUMENT NUMBER: 115:252363

ORIGINAL REFERENCE NO.: 115:42817a,42820a

TITLE: Two marine sesquiterpene thiocyanates

AUTHOR(S): Pham, Anthony T.; Ichiba, Toshio; Yoshida, Wesley Y.;
Scheuer, Paul J.; Uchida, Tomohiro; Tanaka, Junichi;
Higa, Tatsuo

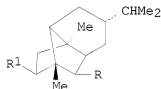
CORPORATE SOURCE: Dep. Chem., Univ. Hawaii, Manoa, Honolulu, HI, 96822,
USA

SOURCE: Tetrahedron Letters (1991), 32(37), 4843-6

CODEN: TELEAY; ISSN: 0040-4039

DOCUMENT TYPE: Journal
LANGUAGE: English

GI



I, R=SCN, R¹=H

II, R=H, R¹=SCN

AB From two sponges collected in Pohnpei (unidentified) and Okinawa
(Phycopsis terpnis) 2-(I) and 4-thiocyanatoneopupukeanane (II) were
isolated.

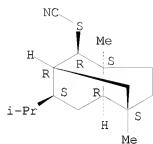
IT 137371-79-0

RL: PROC (Process)
(isolation of, from marine sponge)

RN 137371-79-0 CAPLUS

CN Thiocyanic acid, (1S,3aS,4R,5R,6S,7aR)-octahydro-1,3a-dimethyl-6-(1-
methyl-ethyl)-1,5-methano-1H-inden-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L4 ANSWER 21 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:471910 CAPLUS

DOCUMENT NUMBER: 115:71910

ORIGINAL REFERENCE NO.: 115:12443a,12446a

TITLE: Reactions of 3-carene oxides with allyl- and benzylisothiuronium salts

AUTHOR(S): Artemova, N. P.; Bikkulatova, G. Sh.; Plemenkov, V. V.; Litvinov, I. A.; Kataeva, O. N.; Surkova, L. N.

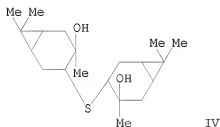
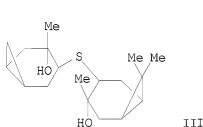
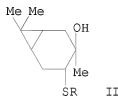
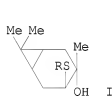
CORPORATE SOURCE: Kazan. Gos. Med. Inst., Kazan, USSR
 SOURCE: Zhurnal Obshchei Khimii (1990), 60(10), 2374-81

CODEN: ZOKHA4; ISSN: 0044-460X

DOCUMENT TYPE: Journal

LANGUAGE: Russian

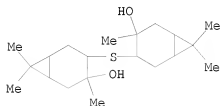
OTHER SOURCE(S): CASREACT 115:71910
 GI



AB The reaction of α - and β -3,4-epoxycaranes with $\text{RSC}(\text{:NH})\text{NH}_2\cdot\text{HX}$ ($\text{R} = \text{allyl}$, $\text{X} = \text{Br}$; $\text{R} = \text{PhCH}_2$, $\text{X} = \text{Cl}$) in EtOH-NaOEt proceeds stereo- and regioselectively to give caranols I and II, resp. in addition to bis(3-hydroxy-4-caranyl)sulfides III and IV.

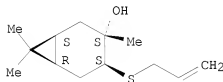
10/923,271

IT 135028-46-5P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal and mol. structure of)
RN 135028-46-5 CAPLUS
CN Bicyclo[4.1.0]heptan-3-ol, 4,4'-thiobis[3,7,7-trimethyl-,
[1S-[1 α ,3 α ,4 β (1'R*,3'R*,4'R*,6'S*),6 α]]- (9CI) (CA
INDEX NAME)



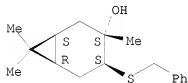
IT 134927-25-6P 134927-26-7P 135028-47-6P
135028-48-7P 135028-49-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 134927-25-6 CAPLUS
CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(2-propenylthio)-,
[1S-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



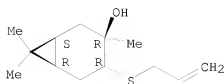
RN 134927-26-7 CAPLUS
CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-[(phenylmethyl)thio]-,
[1S-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



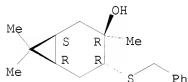
RN 135028-47-6 CAPLUS
CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(2-propenylthio)-,
[1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

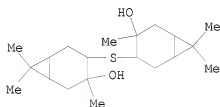


RN 135028-48-7 CAPLUS
 CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-[(phenylmethylthio)]-,
 [1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 135028-49-8 CAPLUS
 CN Bicyclo[4.1.0]heptan-3-ol, 4,4'-thiobis[3,7,7-trimethyl-,
 [1S-[1 α ,3 β ,4 α (1'R*,3'S*,4'S*,6'S*),6 α]]- (9CI) (CA
 INDEX NAME)



L4 ANSWER 22 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:471909 CAPLUS

DOCUMENT NUMBER: 115:71909

ORIGINAL REFERENCE NO.: 115:12443a,12446a

TITLE: Lewis acid catalyzed addition of disulfides to
 3-carene

AUTHOR(S): Nikitina, L. E.; Plemenkov, V. V.; Chernov, A. N.;

Litvinov, I. A.; Kataeva, O. N.

CORPORATE SOURCE: Kazan. Gos. Med. Inst., Kazan, USSR

SOURCE: Zhurnal Obshchei Khimii (1990), 60(10),
 2303-8

CODEN: ZOKHA4; ISSN: 0044-460X

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Reaction of 3-carene with R₂S₂ (R = Me, Et) in the presence of ZnCl₂ is a convenient method for obtaining S-containing derivs. of carene with two alkythio groups and alkylsulfonyl groups at the C3 and C4 carbons. Ph₂S₂ in this reaction gives 4-phenylthiocarene. The addition takes place

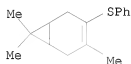
trans-stereoselectively with electrophilic attack at the position trans to the cyclopropane fragment. The sensitivity of the process to steric factors contributes to the low yields of products of cis-addition and to formal substitution products.

IT 134927-33-6P

RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in reaction of carene with di-Ph disulfide)

RN 134927-33-6 CAPLUS

CN Bicyclo[4.1.0]hept-3-ene, 3,7,7-trimethyl-4-(phenylthio)- (CA INDEX NAME)



IT 134927-27-8P 134927-28-9P 134927-30-3P

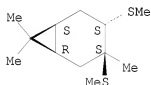
134927-31-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and oxidation of)

RN 134927-27-8 CAPLUS

CN Bicyclo[4.1.0]heptane, 3,7,7-trimethyl-3,4-bis(methylthio)-,
(1 α ,3 β ,4 α ,6 α)- (9CI) (CA INDEX NAME)

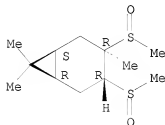
Relative stereochemistry.



RN 134927-28-9 CAPLUS

CN Bicyclo[4.1.0]heptane, 3,7,7-trimethyl-3,4-bis(methylsulfinyl)-,
(1 α ,3 β ,4 α ,6 α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

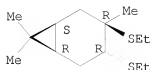


RN 134927-30-3 CAPLUS

CN Bicyclo[4.1.0]heptane, 3,4-bis(ethylthio)-3,7,7-trimethyl-,
(1 α ,3 β ,4 α ,6 α)- (9CI) (CA INDEX NAME)

10/923,271

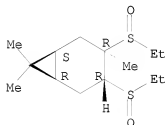
Relative stereochemistry.



RN 134927-31-4 CAPLUS

CN Bicyclo[4.1.0]heptane, 3,4-bis(ethylsulfinyl)-3,7,7-trimethyl-,
(1 α ,3 β ,4 α ,6 α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 134927-29-0P 134927-32-5P 135028-50-1P

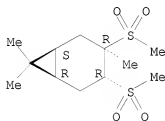
135028-51-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 134927-29-0 CAPLUS

CN Bicyclo[4.1.0]heptane, 3,4-bis(methylsulfonyl)-3,7,7-trimethyl-,
(1 α ,3 β ,4 α ,6 α)- (9CI) (CA INDEX NAME)

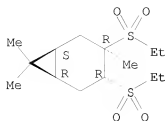
Relative stereochemistry.



RN 134927-32-5 CAPLUS

CN Bicyclo[4.1.0]heptane, 3,4-bis(ethylsulfonyl)-3,7,7-trimethyl-,
(1 α ,3 β ,4 α ,6 α)- (9CI) (CA INDEX NAME)

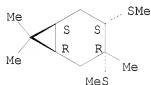
Relative stereochemistry.



RN 135028-50-1 CAPLUS

CN Bicyclo[4.1.0]heptane, 3,7,7-trimethyl-3,4-bis(methylthio)-,
(1 α ,3 α ,4 α ,6 α)- (9CI) (CA INDEX NAME)

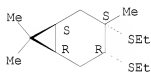
Relative stereochemistry.



RN 135028-51-2 CAPLUS

CN Bicyclo[4.1.0]heptane, 3,4-bis(ethylthio)-3,7,7-trimethyl-,
(1 α ,3 α ,4 α ,6 α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:143721 CAPLUS

DOCUMENT NUMBER: 114:143721

ORIGINAL REFERENCE NO.: 114:24401a,24404a

TITLE: Reactions of 3-carene oxides with isothiuronium salts.
Synthesis and molecular structure of 4-alkylthio- and
4-alkylsulfonylcaran-3-olsAUTHOR(S): Artemova, N. P.; Bikbulatova, G. Sh.; Plemenkov, V.
V.; Litvinov, I. A.; Kataeva, O. N.; Naumov, V. A.CORPORATE SOURCE: Kazan. Gos. Med. Inst., Kazan, USSR
SOURCE: Zhurnal Obshchei Khimii (1989), 59(12),
2718-24

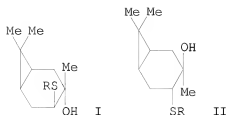
CODEN: ZOKHA4; ISSN: 0044-460X

DOCUMENT TYPE: Journal

LANGUAGE: Russian

OTHER SOURCE(S): CASREACT 114:143721

GI



AB cis- And trans-3,4-epoxycaranes react with $RSC(:NH)NH_2.HX$ ($R = Me$, $X =$ sulfate; $R = Et$, $X = Br$; $R = Me_2CH$, $X =$ iodide) regio- and stereoselectively to give alkythiocaranols I from trans-reactant and II from cis-reactant. Oxidation of I and II by H_2O_2 gives the corresponding sulfones.

IT 98796-82-8P 127181-77-5P 127181-78-6P
127181-79-7P 127181-80-0P 127181-81-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and oxidation by hydrogen peroxide)

RN 98796-82-8 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(methylthio)-,
[1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

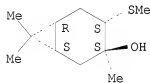
Absolute stereochemistry.



RN 127181-77-5 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(methylthio)-,
[1S-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 127181-78-6 CAPLUS

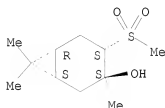
CN Bicyclo[4.1.0]heptan-3-ol, 4-(ethylthio)-3,7,7-trimethyl-,
[1S-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

10/923,271

[1S-(1 α , 3 α , 4 β , 6 α)]- (9CI) (CA INDEX NAME)

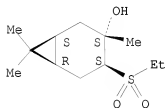
Absolute stereochemistry.



RN 127118-69-8 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 4-(ethylsulfonyl)-3,7,7-trimethyl-,
[1S-(1 α , 3 α , 4 β , 6 α)]- (9CI) (CA INDEX NAME)

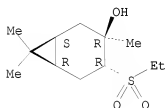
Absolute stereochemistry.



RN 127181-82-2 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 4-(ethylsulfonyl)-3,7,7-trimethyl-,
[1S-(1 α , 3 β , 4 α , 6 α)]- (9CI) (CA INDEX NAME)

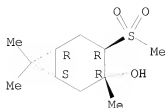
Absolute stereochemistry.



RN 127182-21-2 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(methylsulfonyl)-,
[1S-(1 α , 3 β , 4 α , 6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



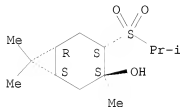
IT 127118-70-1P 127181-83-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, crystal structure, and mol. structure of)

RN 127118-70-1 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-[(1-methylethyl)sulfonyl]-,
[1S-(1α,3α,4β,6α)]- (9CI) (CA INDEX NAME)

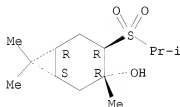
Absolute stereochemistry.



RN 127181-83-3 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-[(1-methylethyl)sulfonyl]-,
[1S-(1α,3β,4α,6α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 24 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:121541 CAPLUS

DOCUMENT NUMBER: 114:121541

ORIGINAL REFERENCE NO.: 114:20693a,20696a

TITLE: Rearrangements of 1,4,4- and 2,2,5-
trimethylbicyclo[3.2.1]oct-6-yl cations

AUTHOR(S): Kirmse, Wolfgang; Moench, Dietmar

CORPORATE SOURCE: Fak. Chem., Ruhr-Univ. Bochum, Bochum, D-4630/1,
Germany

SOURCE: Chemische Berichte (1991), 124(1), 237-40

CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 114:121541

GI

For diagram(s), see printed CA Issue.

AB

1,4,4-Trimethylbicyclo[3.2.1]oct-6-yl cations (I) are generated from the tosylhydrazone (RR1 = NNHTs), by nitrous acid deamination of the amines II (R = NH2, R1 = H; R = H, R1 = NH2) and by acetolysis of the brosylates II (R = D, R1 = OBs; R = OBs, R1 = O). The product distributions are but slightly affected by the configuration (exo vs. endo) of the leaving groups. The predominant product, 1,4,4-trimethylbicyclo[3.2.1]octan-6-ol (II, R = OH, R1 = H) is formed without significant redistribution of a 6-2H label. The degenerate Wagner-Meerwein rearrangement of the parent 6-bicyclo[3.2.1]octyl cation is virtually eliminated by the presence of two Me groups at C-4. Enhanced conformational strain, raising the barrier to ring flipping, accounts for these observations. Minor products arise from a 7,6-hydride shift of I, followed by Wagner-Meerwein rearrangement. When the 2,5-trimethylbicyclo[3.2.1]oct-6-yl cation III is generated directly from the tosylhydrazone IV, the tertiary alc. V is obtained as the major product. The conformational barrier to Wagner-Meerwein rearrangement is compensated by the incipient stabilization of the tertiary carbocation.

IT

130380-84-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

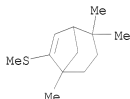
(preparation and oxidation of)

RN

130380-84-6 CAPLUS

CN

Bicyclo[3.2.1]oct-6-ene, 1,4,4-trimethyl-7-(methylthio)- (CA INDEX NAME)



L4 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:612355 CAPLUS

DOCUMENT NUMBER: 113:212355

ORIGINAL REFERENCE NO.: 113:35895a,35898a

TITLE: Nucleophilic substitution in β -chloro(alkylthio)caranes obtained by electrophilic chlorosulfenylation of 3-carene

AUTHOR(S): Plemenkov, V. V.; Bairamova, F. A.; Butenko, G. G.; Artemova, N. P.; Litvinov, I. A.; Naumov, V. A.; Il'yasov, A. V.; Udarov, B. G.

CORPORATE SOURCE: Kazan. Gos. Med. Inst., Kazan, USSR

SOURCE: Zhurnal Organicheskoi Khimii (1990), 26(5), 1010-16

CODEN: ZORKAE; ISSN: 0514-7492

DOCUMENT TYPE:

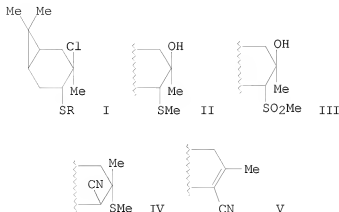
Journal

LANGUAGE:

Russian

OTHER SOURCE(S):
GI

CASREACT 113:212355



AB Treating 3-carene with RSCl ($\text{R} = \text{Me}, \text{Et}, \text{Ph}$) in Et_2O gave 95-96% alkylthiocaranes I which ($\text{R} = \text{Me}$) was hydrolyzed by aqueous KOH to give 70% caranol II followed by oxidation to give the sulfone III. Heating I ($\text{R} = \text{Me}$) with $\text{Et}_4\text{N}+\text{CN}^-$ gave 65% nitrile IV which was oxidized to the sulfone followed by desulfonylation with KOCMe_3 to give 47% nitrile V.

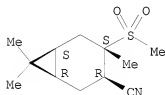
IT 130321-31-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and elimination of methylsulphenyl group from)

RN 130321-31-2 CAPLUS

CN Bicyclo[4.1.0]heptane-3-carbonitrile, 4,7,7-trimethyl-4-(methylsulfonyl)-, (1 α ,3 β ,4 α ,6 α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 130226-58-3P 130321-29-8P

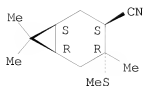
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and oxidation of)

RN 130226-58-3 CAPLUS

CN Bicyclo[4.1.0]heptane-3-carbonitrile, 4,7,7-trimethyl-4-(methylthio)-, (1 α ,3 β ,4 α ,6 α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

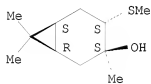
10/923,271



RN 130321-29-8 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(methylthio)-, (1α,3β,4α,6α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



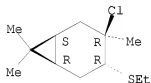
IT 130226-57-2P 130321-26-5P 130321-30-1P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 130226-57-2 CAPLUS

CN Bicyclo[4.1.0]heptane, 3-chloro-4-(ethylthio)-3,7,7-trimethyl-, (1α,3β,4α,6α)- (9CI) (CA INDEX NAME)

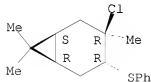
Relative stereochemistry.



RN 130321-26-5 CAPLUS

CN Bicyclo[4.1.0]heptane, 3-chloro-3,7,7-trimethyl-4-(phenylthio)-, (1α,3β,4α,6α)- (9CI) (CA INDEX NAME)

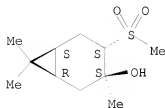
Relative stereochemistry.



RN 130321-30-1 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(methylsulfonyl)-, (1α,3β,4α,6α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



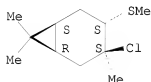
IT 130321-25-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, thermolysis, hydrolysis, and cyanation of)

RN 130321-25-4 CAPLUS

CN Bicyclo[4.1.0]heptane, 3-chloro-3,7,7-trimethyl-4-(methylthio)-,
(1 α ,3 β ,4 α ,6 α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 26 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:506839 CAPLUS

DOCUMENT NUMBER: 113:106839

ORIGINAL REFERENCE NO.: 113:17907a,17910a

TITLE: Molecular structure and absolute configuration of
1(R),3(S),4(R),6(R),3,7,7-trimethyl-3-methylsulfonyl-4-
cyano-bicyclo[4.1.0]heptane

AUTHOR(S): Litvinov, I. A.; Naumov, V. A.; Plemenkov, V. V.

CORPORATE SOURCE: Inst. Org. Fiz. Khim. im. Arbuzova, Kazan, USSR

SOURCE: Zhurnal Strukturnoi Khimii (1990), 31(2),

192-4

CODEN: ZSTKAI; ISSN: 0136-7463

DOCUMENT TYPE:

LANGUAGE: Russian

AB The title compound is orthorhombic, space group P212121, with a 6.544(4), b 10.657(3), and c 18.410(6) Å; dc = 1.25 for Z = 4. The atomic coordinates are given. The structure was solved by direct methods and refined by least-squares to R = 0.032. The bond lengths and angles are given. The absolute configuration is described.

IT 129085-28-5

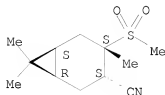
RL: PRP (Properties)

(absolute configuration and structure of)

RN 129085-28-5 CAPLUS

CN Bicyclo[4.1.0]heptane-3-carbonitrile, 4,7,7-trimethyl-4-(methylsulfonyl)-,
[1R-(1 α ,3 α ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:118322 CAPLUS

DOCUMENT NUMBER: 112:118322

ORIGINAL REFERENCE NO.: 112:20027a,20030a

TITLE: Method of producing 4β-(alkylthio)caran-3α-ols

INVENTOR(S): Plemenkov, V. V.; Bikkulatova, G. Sh.; Artemova, N.

P.; Surkova, L. N.; Il'yasov, A. V.; Nafikova, A. A.

PATENT ASSIGNEE(S): Kazakh State Medical Institute, USSR; Arbuzov, A. E.,

Institute of Organic and Physical Chemistry

SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1989, (29), 77-8.

CODEN: URXXAF

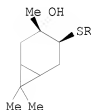
DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1498760	A1	19890807	SU 1987-4220849	19870331 <---
PRIORITY APPLN. INFO.: GI			SU 1987-4220849	19870331



AB The title compds. (I; R = Et, Me₂CH, Bu) are prepared by reaction of α-3,4-epoxycaran with RSH in the presence of RNa and Me₂SO at 75-140°.

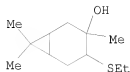
IT 85567-25-5P 125600-35-3P 125600-36-4P

RL: SPN (Synthetic preparation); PREP (Preparation of)

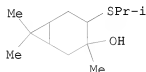
(preparation of)

RN 85567-25-5 CAPLUS

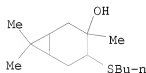
CN Bicyclo[4.1.0]heptan-3-ol, 4-(ethylthio)-3,7,7-trimethyl- (CA INDEX NAME)



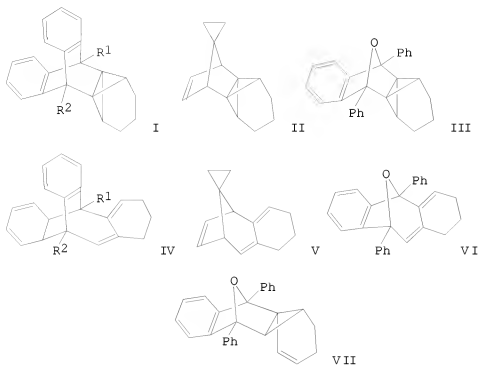
RN 125600-35-3 CAPLUS
 CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-[(1-methylethyl)thio]- (CA INDEX NAME)



RN 125600-36-4 CAPLUS
 CN Bicyclo[4.1.0]heptan-3-ol, 4-(butylthio)-3,7,7-trimethyl- (CA INDEX NAME)



L4 ANSWER 28 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1985:595956 CAPLUS
 DOCUMENT NUMBER: 103:195956
 ORIGINAL REFERENCE NO.: 103:31569a,31572a
 TITLE: On the chemistry of some [4.1.1]- and [3.1.1]propellanes
 AUTHOR(S): Baumgart, Klaus Dieter; Harnisch, Hanna; Szeimies-Seebach, Ursula; Szeimies, Guenter
 CORPORATE SOURCE: Inst. Org. Chem., Univ. Muenchen, Munich, D-8000/2, Fed. Rep. Ger.
 SOURCE: Chemische Berichte (1985), 118(7), 2883-916
 CODEN: CHBEAM; ISSN: 0009-2940
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 OTHER SOURCE(S): CASREACT 103:195956
 GI



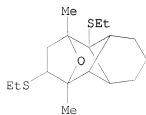
AB Thermal isomerization of propellanes e.g., I (R1 = H, Me, R2 = H), II or III gave 1,3-dienes IV-VI. The rates of these rearrangements were strongly enhanced by traces of unknown electrophilic reagents. Adding DABCO to the thermolysis solns. eliminated the rate accelerating effects. The intended rearrangement of the propellanes by electrophilic catalysts at room temperature proceeded with varying rates to give the expected dienes. However, using Me3SiCl and SiCl4 gave norcorenes, e.g. III gave VII. Also described were addition reactions and radical reactions of selected propellanes.

IT 98230-01-4P

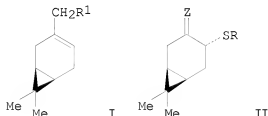
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 98230-01-4 CAPLUS

CN 12-Oxatetracyclo[7.2.1.02,7.03,8]dodecane, 2,10-bis(ethylthio)-1,9-dimethyl-, stereoisomer (9CI) (CA INDEX NAME)



L4 ANSWER 29 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1985:578464 CAPLUS
 DOCUMENT NUMBER: 103:178464
 ORIGINAL REFERENCE NO.: 103:28731a,28734a
 TITLE: Selective functionalization of (+)-3-carene
 AUTHOR(S): Takabe, Kunihiro; Inamori, Masahito; Nashiki, Ryohei;
 Yamada, Takashi; Katagiri, Takao
 CORPORATE SOURCE: Dep. Synth. Chem., Shizuoka Univ., Hamamatsu, 432,
 Japan
 SOURCE: Shizuoka Daigaku Kogakubu Kenkyu Hokoku (1984
), 35, 25-9
 CODEN: SDKKAT; ISSN: 0583-0915
 DOCUMENT TYPE: Journal
 LANGUAGE: Japanese
 GI



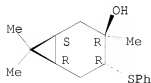
AB Regio- and stereoselective addition of RSCl ($\text{R} = \text{Ph}, \text{Me}$) to (+)-3-carene (I, $\text{R1} = \text{H}$) gave 94-95% sulfide II ($\text{Z} = \alpha\text{-Me}, \beta\text{-Cl}$), reaction of which with NaOAc/AcOH gave II ($\text{Z} = \alpha\text{-Me}, \beta\text{-OAc}$). Dehydrochlorination or dehydration of II ($\text{Z} = \alpha\text{-Me}, \beta\text{-Cl}, \beta\text{-OH}$) gave II ($\text{Z} = \text{CH}_2$), thermal isomerization of which gave I ($\text{R1} = \text{SR}$). I ($\text{R1} = \text{Ph}$) is a key intermediate for the synthesis of natural products.

IT 91464-74-3P 98796-80-6P 98796-81-7P
 98796-82-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reactions of)

RN 91464-74-3 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(phenylthio)-,
 [1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

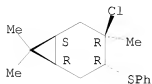


RN 98796-80-6 CAPLUS
 CN Bicyclo[4.1.0]heptane, 3-chloro-3,7,7-trimethyl-4-(phenylthio)-,

10/923,271

[1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

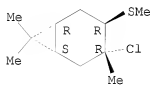
Absolute stereochemistry.



RN 98796-81-7 CAPLUS

CN Bicyclo[4.1.0]heptane, 3-chloro-3,7,7-trimethyl-4-(methylthio)-,
[1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

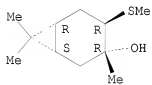
Absolute stereochemistry.



RN 98796-82-8 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(methylthio)-,
[1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

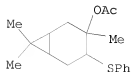


IT 91413-40-0P 98796-83-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

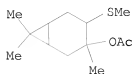
RN 91413-40-0 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(phenylthio)-, acetate,
[1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)



RN 98796-83-9 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(methylthio)-, acetate, [1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)



L4 ANSWER 30 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1984:491246 CAPLUS

DOCUMENT NUMBER: 101:91246

ORIGINAL REFERENCE NO.: 101:13999a,14002a

TITLE: A facile route to (-)-car-4-en-3 α -ol and (-)-car-4-en-3 β -ol, intermediates for bioactive synthetic pyrethroids, synthesis of tertiary allylic alcohols by pyrolysis of sulfoxides

AUTHOR(S): Mitra, R. B.; Muljiani, Z.; Deshmukh, A. R. A. S.; Joshi, V. S.; Gadre, S. R.

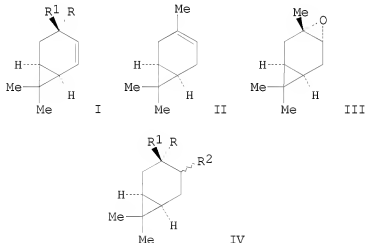
CORPORATE SOURCE: Natl. Chem. Lab., Poona City, 411 008, India
SOURCE: Synthetic Communications (1984), 14(2), 101-12

DOCUMENT TYPE: CODEN: SYNCAV; ISSN: 0039-7911

LANGUAGE: Journal

English

GI



AB (-)-Car-4-en-3 α -ol (I, R = OH, R1 = Me) and (-)-car-4-en-3 β -ol (I, R = Me, R1 = OH), intermediates for pyrethroids, were prepared via epoxidn. of (+)-3-carene (II) with H2O2, regio- and stereospecific

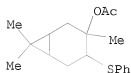
phenylsulfonylation of the resulting epoxide III with NaSPh, oxidation of the corresponding sulfides (IV, R-R2 = OH, Me, β -PhS; Me, OH, α -PhS; resp.) with H2O2, and pyrolysis of the corresponding sulfoxides [IV, R-R2 = OH, Me, PhS(O); Me, OH, α -PhS(O); resp.].

IT 91413-40-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)

RN 91413-40-0 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(phenylthio)-, acetate, [1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)



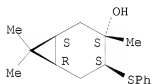
IT 91413-35-3P 91464-74-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oxidation of)

RN 91413-35-3 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(phenylthio)-, [1S-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

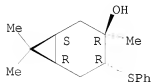
Absolute stereochemistry.



RN 91464-74-3 CAPLUS

CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(phenylthio)-, [1S-(1 α ,3 β ,4 α ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



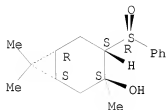
IT 91413-37-5P 91464-75-4P 91464-79-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and pyrolysis of)

10/923,271

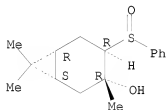
RN 91413-37-5 CAPLUS
CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(phenylsulfinyl)-,
[1S-[1 α ,3 α ,4 β (S*),6 α]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



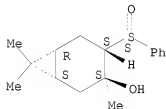
RN 91464-75-4 CAPLUS
CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(phenylsulfinyl)-,
[1S-[1 α ,3 α ,4 β (R*),6 α]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



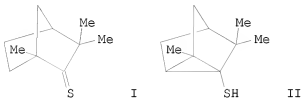
RN 91464-79-8 CAPLUS
CN Bicyclo[4.1.0]heptan-3-ol, 3,7,7-trimethyl-4-(phenylsulfinyl)-,
[1S-[1 α ,3 α ,4 β (R*),6 α]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 31 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1979:203171 CAPLUS
DOCUMENT NUMBER: 90:203171
ORIGINAL REFERENCE NO.: 90:32309a,32312a
TITLE: On the stereochemistry of thiocarbonyl S2 hydrogen abstraction
AUTHOR(S): Blackwell, D. S. L.; Lee, K. H.; De Mayo, P.;

Petrasiunas, G. L. R.; Reverdy, G.
 CORPORATE SOURCE: Dep. Chem., Univ. Western Ontario, London, ON, Can.
 SOURCE: Nouveau Journal de Chimie (1979), 3(2),
 123-31
 CODEN: NJCHD4; ISSN: 0398-9836
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI

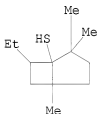


AB Excitation of bicyclic bridged alicyclic thiones into the S2 state gives intramol. cyclization and formation of cyclopropyl thiols (β -insertion). For example, irradiation of thiofenchone I gave thiol II. A study of the stereochem. leads to the conclusion that the volume of space active in the H abstraction and cyclization lies above and below the plane of the thiocarbonyl group. The reactive state is ($1\pi, \pi^*$). The cyclopropyl thiols, on heating, revert to thiones, sometimes with rearranged C skeletons.

IT 70233-50-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 70233-50-0 CAPLUS

CN Bicyclo[3.2.0]heptane-1-thiol, 7-ethyl-2,2,5-trimethyl- (CA INDEX NAME)



L4 ANSWER 32 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:23329 CAPLUS

DOCUMENT NUMBER: 90:23329

ORIGINAL REFERENCE NO.: 90:3863a,3866a

TITLE: Terpene sulfides of ruthenium for resistors

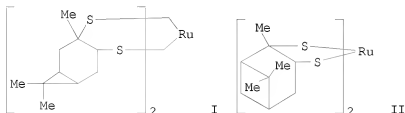
INVENTOR(S): Komarov, V. P.; Lazarev, V. B.; Shaplygin, I. S.

PATENT ASSIGNEE(S): Kurnakov, N. S., Institute of General and Inorganic Chemistry, USSR

SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1978, 55(36), 102.

DOCUMENT TYPE: CODEN: URXXAF
 LANGUAGE: Patent
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION: Russian

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 626093	A1	19780930	SU 1975-2175505	19750922 <--
PRIORITY APPLN. INFO.: GI			SU 1975-2175505	A 19750922



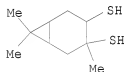
AB The title compds. I and II, were prepared by treating an alc. solution of Ru oxychloride or anhydrous RuCl₃ with excess sulfurated turpentine, or dimercapto-A3-carene or dimercaptopinene at 50-75°.

IT 68671-21-6

RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with ruthenium oxychloride and trichloride)

RN 68671-21-6 CAPLUS

CN Bicyclo[4.1.0]heptane-3,4-dithiol, 3,7,7-trimethyl- (CA INDEX NAME)



L4 ANSWER 33 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1978:556695 CAPLUS

DOCUMENT NUMBER: 89:156695

ORIGINAL REFERENCE NO.: 89:24155a,24158a

TITLE: Formation conditions and structure of gold terpene sulfide

AUTHOR(S): Komarov, V. P.; Lazarev, V. B.

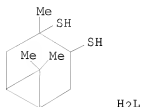
CORPORATE SOURCE: Inst. Obshch. Neorg. Khim. im. Kurnakova, Moscow, USSR
 SOURCE: Zhurnal Neorganicheskoi Khimii (1978),
 23(7), 1865-70

CODEN: ZNOKAQ; ISSN: 0044-457X

DOCUMENT TYPE: Journal

LANGUAGE: Russian

GI

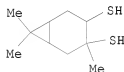


AB The terpene dimercaptan (H₂L) reacted with NH₄AuCl₄ to give Au₂L which was characterized by IR and NMR spectra. H₂L was obtained from the reaction of Δ³-carene with S.

IT 67775-59-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 67775-59-1 CAPLUS

CN Bicyclo[4.1.0]heptane-3,4-dithiol, 3,7,7-trimethyl-, digold(1+) salt (9CI)
(CA INDEX NAME)



● 2 Au(I)

L4 ANSWER 34 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1973:442700 CAPLUS

DOCUMENT NUMBER: 79:42700

ORIGINAL REFERENCE NO.: 79:6945a,6948a

TITLE: Reaction of 3,4-epoxycaranes with sodium sulfite and hydrogen sulfite

AUTHOR(S): Myslinski, Eugeniusz; Michalek, Emilia

CORPORATE SOURCE: N. Copernicus Univ., Torun, Pol.

SOURCE: Roczniki Chemii (1973), 47(2), 285-9

CODEN: ROCHAC; ISSN: 0035-7677

DOCUMENT TYPE: Journal

LANGUAGE: Polish

GI For diagram(s), see printed CA Issue.

AB Trans-3,4-epoxycarane (I) treated with aqueous NaHSO₃ gave 52° of the alc. (II, R = OH). A similar reaction with cis-3,4-epoxycarane (III) yielded 61° of a 4:1 mixture of IV (R = OH) and diol V. When refluxed with an aqueous solution of Na₂SO₃, I gave after 85 hr 32° II (R = OH) and 27° of caranol IV (R = SO₃Na). An analogous reaction

with III was complete in 245 hr, the major product (67%) being II (R = SO₃Na), and the minor product (21%), a mixture of IV (Rf = OH) and V.

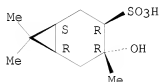
IT 43009-80-9P 43009-81-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 43009-80-9 CAPLUS

CN Bicyclo[4.1.0]heptane-3-sulfonic acid, 4-hydroxy-4,7,7-trimethyl-, monosodium salt, (1 α ,3 β ,4 α ,6 α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

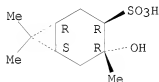


● Na

RN 43009-81-0 CAPLUS

CN Bicyclo[4.1.0]heptane-3-sulfonic acid, 4-hydroxy-4,7,7-trimethyl-, monosodium salt, [1R-(1 α ,3 α ,4 β ,6 α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● Na

L4 ANSWER 35 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1964:9922 CAPLUS

DOCUMENT NUMBER: 60:9922

ORIGINAL REFERENCE NO.: 60:1798d-e

TITLE: Unsaturated thio alcohols of the carane series

AUTHOR(S): Myslinski, Eugeniusz; Krupowicz, Jan

CORPORATE SOURCE: Univ. Torun, Pol.

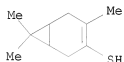
SOURCE: Roczniki Chemii (1963), 37(7/8), 787-94

CODEN: ROCHAC; ISSN: 0035-7677

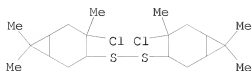
DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

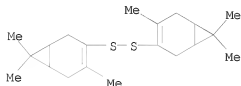
GI For diagram(s), see printed CA Issue.
 AB Hydrogenation of a mixture of carenyldithiocarenes with LiAlH_4 yielded 13% d-3-carene, 55% I, b3 70-2°, d20 0.9873, n20D 1.5253, $[\alpha]_{20D}$ 13.6°, and 28% II, b3 62-4°, d20 0.9671, n20D 1.5130, $[\alpha]_{20D}$ 91°. I and II desulfurized with Raney Ni gave the corresponding 3- or 4-carene. The infrared spectra of the products were examined
 IT 94268-56-1P, 3-Carene-4-thiol
 RL: PREP (Preparation)
 (preparation of)
 RN 94268-56-1 CAPLUS
 CN Bicyclo[4.1.0]hept-3-ene-3-thiol, 4,7,7-trimethyl- (CA INDEX NAME)



L4 ANSWER 36 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1963:435736 CAPLUS
 DOCUMENT NUMBER: 59:35736
 ORIGINAL REFERENCE NO.: 59:6441b-d
 TITLE: Reaction of sulfur chloride with d-3-carene
 AUTHOR(S): Krupowicz, Jan; Myslinski, Eugeniusz
 CORPORATE SOURCE: Univ. Torun, Pol.
 SOURCE: Roczniki Chemii (1962), 36, 1575-81
 CODEN: ROCHAC; ISSN: 0035-7677
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 GI For diagram(s), see printed CA Issue.
 AB SCl_2 (67.5 g.) was added during 4 hrs. at -5°, to a solution of 136 g. d-3-carene in 203.5 g. C_6H_6 . The benzene solution, washed with saturated aqueous NaHCO_3 and H_2O and evaporated during 6 hrs. at 50° and 5 mm. Hg, gave 195 g. bis(4-chloro-3-caranyl) disulfide (I), n20D 1.5485, d20 1.1200, $[\alpha]_{20D}$ -150.8° (C_6H_6). I, oxidized with KMnO_4 , afforded cis-caronic acid, m. 174-6°. I, dehydrochlorinated with $\text{C}_5\text{H}_5\text{N}$, gave a mixture of carenyldithiocarenes, n20D 1.5767, d20 1.1170, $[\alpha]_{20D}$ 132.4°, which, on desulfurization with Raney Ni, gave a mixture of d-3-carene and d-4-carene. Hydrogenation of the carene mixture with Adams catalyst in glacial AcOH afforded carane, b. 166-7°, n20D 1.4561, d20 0.8326, $[\alpha]_{20D}$ 2°, MRD 45.14.
 IT 99813-39-5P, Disulfide, bis(3-chloro-4-caryl) 104157-93-9P
 , 3-Carene-4-yl disulfide
 RL: PREP (Preparation)
 (preparation of)
 RN 99813-39-5 CAPLUS
 CN Disulfide, bis(3-chloro-4-caryl) (7CI) (CA INDEX NAME)



RN 104157-93-9 CAPLUS
 CN 3-Caren-4-yl disulfide (7CI) (CA INDEX NAME)



L4 ANSWER 37 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1962:436475 CAPLUS
 DOCUMENT NUMBER: 57:36475
 ORIGINAL REFERENCE NO.: 57:7313d-e
 TITLE: Preparation of carene sulfoxide
 AUTHOR(S): Krupowicz, Jan; Wnek, Maria
 CORPORATE SOURCE: Univ. Torun, Pol.
 SOURCE: Roczniki Chemii (1961), 35, 1329-32
 CODEN: ROCHAC; ISSN: 0035-7677
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

AB Thionyl chloride (59 g.) was added dropwise 10 hrs. to 68 g. d-3-carene in the presence of 3 g. powdered Fe at -5°. The oil was dissolved in hot BuOH (I) and treated with aqueous NH₃ to sep. the NH₄ salts. Carene sulfoxide (II), m. 120° (decomposition), was precipitated from the filtrate by addition

of 200 ml. EtOH and must be recrystd. from I. The yield may be very small. Oxidation of II with KMnO₄ gave cis-caronic acid, m. 170-1°.

IT 104158-11-4P, 3-Caren-4-yl sulfoxide(?)
 RL: PREP (Preparation)
 (preparation of)
 RN 104158-11-4 CAPLUS
 CN 3-Caren-4-yl sulfoxide (7CI) (CA INDEX NAME)

